

Commonwealth of Kentucky
Division for Air Quality
STATEMENT OF BASIS

Title V/Synthetic Minor, Construction/Operating

Permit: V-17-034 R1

Barton Brands of Kentucky

Bardstown, KY 40004

May 17, 2021

Dakota Ross, Reviewer

SOURCE ID: 21-179-00020

AGENCY INTEREST: 3247

ACTIVITY: APE20210001

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SECTION 1 - SOURCE DESCRIPTION

SIC Code: 2085

Single Source Det. ☐ Yes ☒ No If Yes, Affiliated Source AI:

Source-wide Limit ☒ Yes ☐ No If Yes, See Section 4, Table A

28 Source Category ☐ Yes ☒ No If Yes, Category:

County: Nelson

Nonattainment Area ☒ N/A ☐ PM₁₀ ☐ PM_{2.5} ☐ CO ☐ NO_x ☐ SO₂ ☐ Ozone ☐ Lead

PTE* greater than 100 tpy for any criteria air pollutant ☒ Yes ☐ No

If yes, for what pollutant(s)?

☒ PM₁₀ ☒ PM_{2.5} ☒ CO ☒ NO_x ☒ SO₂ ☒ VOC

PTE* greater than 250 tpy for any criteria air pollutant ☒ Yes ☐ No

If yes, for what pollutant(s)?

☐ PM₁₀ ☐ PM_{2.5} ☐ CO ☐ NO_x ☒ SO₂ ☐ VOC

PTE* greater than 10 tpy for any single hazardous air pollutant (HAP) ☒ Yes ☐ No

If yes, list which pollutant(s): Hydrochloric Acid

PTE* greater than 25 tpy for combined HAP ☒ Yes ☐ No

*PTE does not include self-imposed emission limitations.

Description of Facility:

Barton Brands of Kentucky (Barton), owned by Sazerac Distillers, LLC, operates a distillery in Nelson County, Kentucky. The source produces whiskey and bourbon from grains through fermentation and distillation. Water and milled grain are fed into mash cookers, where the grain starches are converted to sugars by heating. The cooked grain/water mixture is fed into fermenter vessels as a batch operation to convert the sugars to ethanol. After the appropriate residence time, the mixture is processed through distillation columns and condensers to separate the ethanol from the mixture. The condensed liquid is put into barrels to be aged. After liquid is aged, the bourbon or whiskey is dumped from the barrels, processed, and bottled for shipping.

SECTION 2 – CURRENT APPLICATION

Permit Number: V-17-034 R1 Activities: APE20200002/APE20210001

Received: 9/11/20; 2/17/21 Application Complete Date(s): 9/21/20; 3/02/21

Permit Action: ☐ Initial ☐ Renewal ☒ Sig. Rev ☐ Minor Rev ☐ Administrative

Construction/Modification Requested? ☒ Yes ☐ No

Previous 502(b)(10) or Off-Permit Changes incorporated with this permit action ☒ Yes ☐ No

Description of Action:

On September 11, 2020, the Division for Air Quality (Division) received from Barton an application for a 502(b)(10) change.

The application sought construction of three new barrel aging warehouses, one with a capacity of 33,000 barrels and two with a capacity of 58,800 barrels. This increased the Facility's total storage capacity from 548,976 barrels to 699,576 barrels. On September 21, 2020 the Division determined that no permit revision is required and the Facility could proceed with the change. Therefore, the change is included with this permit revision.

On February 17, 2021, the Division received an application for a significant revision to install three natural gas-fired boilers, each rated at 71.7 MMBtu/hr (total of 215.1 MMBtu/hr). These units will replace the existing boiler system, which consists of EUs 07 and 08 -two natural gas-fired boilers, each rated at 41.85MMBtu/hr, and EU 09 – a bituminous coal-fired boiler rater at 99.5 MMBtu/hr (total of 183.2 MMBtu/hr).

The facility has requested that the existing boiler system remain operational during the shakedown period. In order to prevent the fossil fuel boilers from becoming one of the 28 listed source categories under the Prevention of Significant Deterioration (PSD) permitting program, the facility has taken a voluntary heat input limit of less than 250 MMBtu/hr for the facilities fossil fuel fired boilers during the shake down period.

The application received on February 17, 2021 also requests a number of insignificant activities be added to the permit.

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS

Emission Unit 01 (01001): Grain Handling Operations				
Pollutant	Emission Limit or Standard	Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method
PM	Discharge of fugitive dust beyond the property line is prohibited.	401 KAR 63:010, Section 3	0.035 lbs/SCC unit (AP-42 9.9.1-1)	Take reasonable precautions to prevent particulate matter from becoming airborne.
Initial Construction Date: 1975				
Applicable Regulation: 401 KAR 63:010, Fugitive emissions, applicable to an apparatus, operation, or road which emits or may emit fugitive emissions provided that the fugitive emissions from such facility are not elsewhere subject to an opacity standard within the administrative regulations of the Division for Air Quality.				

Emission Unit 02 (01003): Grain Cleaning				
Pollutant	Emission Limit or Standard	Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method
PM	2.58 lbs/hr if the process rate is 0.5 tons/hr or less	401 KAR 61:020, Section 3(2)(a)	0.061 lbs/SCC unit (AP-42 9.9.1-1)	Calculate actual emission rates based upon material processed and hours of operation.
	$4.10 * P^{0.67}$ lbs/hr, where P is the process rate in tons/hr if the process rate is greater than 0.5 tons/hr and less than or equal to 30 tons/hr			
	40% opacity	401 KAR 61:020, Section 3(1)(a)	----	Qualitative visual observations and U.S. EPA Reference 9 readings on a weekly basis.

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS (CONTINUED)

Emission Unit 02 (01003): Grain Cleaning

Initial Construction Date: Prior to July 2, 1975

Applicable Regulation:

401 KAR 61:020, Existing process operations, applicable to all process operations, which are not subject to another emission standard with respect to particulates in 401 KAR Chapter 61, commenced before July 2, 1975.

Comments:

The emission factor defined in the permit for use in calculating actual emissions differs from the emission factor specified in the statement of basis. The emission factor in the permit includes the control efficiency provided by the baghouse, which is required by the permit to be in operation at all times that the unit is in operation.

The facility must monitor and maintain records of material processed and hours of operation on a monthly basis.

The facility must perform qualitative visual observations on a weekly basis, and U.S. EPA Method 9 readings if necessary, and maintain records of both.

Emission Unit 03 (02001 and 03001): Fermentation Process

Initial Construction Date: On or before 1969

Modification Date: 2016

Process Description:

Emissions of VOC resulting from grain fermentation are associated with this emission unit. VOCs are emitted from the fermentation vessels and the stillage processed in the dryhouse.

Applicable Regulation:

There are no regulations applicable to this emission unit.

Comments:

The facility must monitor and maintain records of grain processed on a monthly basis.

Emission Unit 05 (04001, 05001, 06001): Barrel Filling, Aging, and Dumping

Initial Construction Date: On or before 1969; Three new warehouses added in 2020

Applicable Regulation:

There are no regulations applicable to this emission unit.

Comments:

The facility must monitor and maintain records of barrels processed on an annual basis.

Three new warehouses added in 2020 increased the Facility's total storage capacity from 548,976 barrels to 699,576 barrels

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS (CONTINUED)

Emission Unit 06 (08001, 08008, 09001): Storage Tanks and Bottling Operation				
Initial Construction Date: On or before 1969 Modification Date: 2016				
<p>Applicable Regulation: 40 CFR 60, Subpart VVa, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006, applicable to pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, and flanges or other connector in VOC service in the synthetic organic chemicals manufacturing industry, as defined in 40 CFR 60.481a.</p> <p>Comments: While 40 CFR 60, Subpart VVa applies to this emission unit, it is exempt from the requirements of 40 CFR 60.482-1a through 60.482-11a, pursuant to 40 CFR 60.480a(a)(4), as the equipment is used to produce beverage alcohol. The facility must maintain a statement listing raw materials and products demonstrating these chemicals are beverage alcohol for use in determining exemptions.</p> <p>The facility must monitor and maintain records of proof gallons processed on an annual basis.</p>				

Emission Unit 07 and 08 (10001, 10003): Dual Fuel-Fired Indired Heat Exchangers				
Pollutant	Emission Limit or Standard	Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method
PM	0.28 lb/MMBtu	401 KAR 59:015 Section 4(1)(c)	Natural Gas: 7.6 lb/SCC unit (AP-42 1.4-2) No. 2 Fuel Oil: 2 lb/SCC unit (AP-42 1.3-1)	Assumed based upon AP-42 emission factors
	(Natural Gas) 20% opacity; except 40% for 6 minutes in any 60 minutes and from building a new fire	401 KAR 59:015, Section 4(2)	----	Assumed based upon natural gas combustion
	(No. 2 Fuel Oil) 20% opacity, except 27% for 6 minutes per hour	40 CFR 60.43c(c) and (d)	----	Initial U.S. EPA Reference Method 9 reading; subsequent emission observations according to 40 CFR 60.47c(a)(1), (2), or (3)

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS (CONTINUED)

Emission Unit 07 and 08 (10001, 10003): Dual Fuel-Fired Indirect Heat Exchangers				
SO ₂	(Natural Gas) 1.25 lb/MMBtu	401 KAR 59:015, Section 5(1)(c)	0.6 lb/SCC unit (AP- 42 1.4-2)	Assumed based upon AP-42 emission factor
	(No. 2 Fuel Oil) 0.50 lb/MMBtu (215 ng/J); or, as an alternative limit liquid fuel to less than or equal to 0.5 weight percent sulfur	40 CFR 60.42c(d) and (i)	47.1 lb/SCC unit (AP- 42 1.3-1)	Fuel supplier certification
<p>Initial Construction Date: 1993</p> <p>Applicable Regulations:</p> <p>401 KAR 59:015, New indirect heat exchangers, applicable to units having a heat input capacity greater than 1 million BTU per hour (MMBtu/hr) and commenced on or after April 9, 1972.</p> <p>40 CFR 60, Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, applicable to each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 100 MMBtu/hr or less, but greater than or equal to 10 MMBtu/hr.</p> <p>Precluded Regulations:</p> <p>401 KAR 51:017, Prevention of significant deterioration of air quality, applicable to the construction of a new major stationary source or a project at an existing major stationary source that commences construction after September 22, 1982, and located in an area designated attainment or unclassifiable under 42 U.S.C. 7407(d)(1)(A)(ii) and (iii). The source has accepted federally-enforceable limitations to preclude the requirements of 401 KAR 51:017.</p> <p>40 CFR 63, Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, applicable to an industrial, commercial, or institutional boiler or process heater as defined in 40 CFR 63.7575 that is located at, or is part of, a major source of HAP, except as specified in 40 CFR 63.7491. The source has accepted federally-enforceable limitations to preclude the requirements of 40 CFR 63, Subpart DDDDD.</p> <p>40 CFR 63, Subpart JJJJJ, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources, applicable to industrial, commercial, or institutional boilers as defined in 40 CFR 63.11237 located at, or is part of, an area source of hazardous air pollutants (HAP), except as specified in 40 CFR 63.11195. These boilers will meet the definition of “gas-fired boiler” in 40 CFR 63.11237 at all times. Gas-fired boilers are not subject to this regulation pursuant to 40 CFR 63.11195(e).</p> <p>Comments:</p>				

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS (CONTINUED)

Emission Unit 07 and 08 (10001, 10003): Dual Fuel-Fired Indired Heat Exchangers

Potential emissions were determined for all three units using emission factors from AP-42 for external combustion for natural gas and No. 2 fuel oil. For pollutants where natural gas combustion resulted in the greatest emissions, potential emissions were determined using natural gas combustion based upon 8,760 hours/year of operation. For pollutants where No. 2 fuel oil resulted in the greatest emissions, potential emissions were determined using No. 2 fuel oil combustion and natural gas combustion based upon 500 hours/year and 8,260 hours/year, respectively. For pollutants where emission factors were only available for No. 2 fuel oil, potential emissions were determined using No. 2 fuel oil combustion based upon 500 hours/year. Attributing a maximum of 500 hours/year to No. 2 fuel oil combustion conservatively accounts for emissions from No. 2 fuel oil from the boilers limited by the 40 CFR 63, Subpart JJJJJ definition of gas-fired boiler. Specifically, 40 CFR 63, Subpart JJJJJ limits the use of liquid fuel to periods of gas curtailment, gas supply interruption, startups, or periodic testing, maintenance, or operator training on liquid fuel in order to be considered a “gas-fired boiler” under the subpart. Periodic testing, maintenance, or operator training on liquid fuel cannot exceed a combined total of 48 hours during any calendar year.

The facility must monitor and maintain records of the amount of each fuel combusted on a monthly basis.

The facility must monitor and maintain records to demonstrate that the boilers meet the definition of “gas-fired boiler” under 40 CFR 63, Subpart JJJJJ.

When No. 2 fuel oil is used, the facility must monitor and maintain records of visible emissions according to monitoring method and frequency specified in 40 CFR 60, Subpart Dc.

Operation of all fossil fuel-fired boilers (including EUs 07 and 08) must be limited to a combined heat input rate of less than 250 MMBtu/hr for all affected facilities.

Emission Unit 09 (10002): Indirect Heat Exchanger

Pollutant	Emission Limit or Standard	Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method
PM	0.36 lb/MMBtu	401 KAR 61:015, Section 4(1)	0.176 lb/SCC unit; controlled EF (2014 stack test)	Performance testing and Compliance Assurance Monitoring; operation of control equipment (multicyclone and baghouse)
	40% opacity; except 60% for 6 minutes in any 60 minutes and from building a new fire	401 KAR 61:015, Section 4(3)	----	Weekly U.S. EPA Reference Method 9 readings

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS (CONTINUED)

Emission Unit 09 (10002): Indirect Heat Exchanger				
SO ₂	1.4 lb/MMBtu	401 KAR 61:015, Section 5(1)	37.776 lb/SCC unit (KYEIS)	Use of lime injection; fuel monitoring; calculate actual emissions
Hg	2.2E-5 lb/MMBtu	40 CFR 63.11201(a) referencing Item 6.a. of Table 1 of 40 CFR 63, Subpart JJJJJ; and 40 CFR 63.11201(d)	8.3E-5 lb/SCC unit (AP-42 1.1-18)	Fuel analysis OR performance testing
CO	420 ppm by volume on a dry basis corrected to 3% O ₂	40 CFR 63.11201(a) referencing Item 6.b. of Table 1 of 40 CFR 63, Subpart JJJJJ; and 40 CFR 63.11201(d)	5 lb/SCC unit (AP-42 1.1-3)	Performance testing; continuous monitoring
<p>Initial Construction Date: 1961</p> <p>Applicable Regulations:</p> <p>401 KAR 61:015, Existing indirect heat exchangers, applicable to indirect heat exchangers having a heat input capacity of more than 1 MMBtu/hr commenced before August 17, 1971, for units with a capacity of more than 250 MMBtu/hr.</p> <p>40 CFR 63, Subpart JJJJJ, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources, applicable to industrial, commercial, or institutional boilers as defined in 40 CFR 63.11237 located at, or is part of, an area source of hazardous air pollutants (HAP), except as specified in 40 CFR 63.11195.</p> <p>40 CFR Part 64, Compliance Assurance Monitoring (CAM), applicable to pollutant-specific emissions units at a major source that is required to obtain a Title V permit and satisfies all of the following criteria:</p> <ul style="list-style-type: none"> • The unit is subject to an emission limitation or standard for the applicable regulated air pollutant, other than an emission limitation or standard proposed by the U.S. EPA Administrator after November 15, 1990 pursuant to Section 111 or 112 of the Clean Air Act; • The unit uses a control device to achieve compliance with any such emission limitation or standard; and • The unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source. <p>Precluded Regulations:</p> <p>401 KAR 51:017, Prevention of significant deterioration of air quality, applicable to the construction of a new major stationary source or a project at an existing major stationary source that commences construction after September 22, 1982, and located in an area designated attainment or unclassifiable under 42 U.S.C. 7407(d)(1)(A)(ii) and (iii). The source has accepted federally-enforceable limitations to preclude the requirements of 401 KAR 51:017.</p>				

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS (CONTINUED)

Emission Unit 09 (10002): Indirect Heat Exchanger

40 CFR 63, Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, applicable to an industrial, commercial, or institutional boiler or process heater as defined in 40 CFR 63.7575 that is located at, or is part of, a major source of HAP, except as specified in 40 CFR 63.7491. The source has accepted federally-enforceable limitations to preclude the requirements of 40 CFR 63, Subpart DDDDD.

Comments:

The facility must monitor and maintain records of weekly U.S. EPA Reference Method 9 readings and bag leak detection system monitoring data to meet the monitoring requirements for CAM for PM.

The facility must monitor and maintain records of fuel usage on a weekly basis and sulfur content, chlorine content, and heat content of each delivered shipment of fuel.

The facility must monitor and maintain records of the average lime feed rate and lime usage on a monthly basis.

The facility must monitor and maintain records from the continuous monitoring system required to demonstrate compliance with the 40 CFR 63, Subpart JJJJJ emission limitation.

Operation of all fossil fuel-fired boilers (including EU 09) must be limited to a combined heat input rate of less than 250 MMBtu/hr for all affected facilities.

Emission Unit 10 (12001): Wastewater Treatment Process

Initial Construction Date: 1989

Modification Date: 2017

Applicable Regulation:

There are no regulations applicable to this emission unit.

Comments:

The facility must monitor and maintain records of wastewater treated on an annual basis.

The 2017 modification is the result of construction of two wastewater treatment tanks associated with Emission Unit 10. The wastewater treatment tanks have been incorporated into the permit as insignificant activities, identified as WWT Tank #1 and WWT Tank #2.

The permit description for Emission Unit 10 has also been revised to reflect the correct maximum continuous rating of 120,450,000 gallons per year, as identified in the renewal application (APE20170002), from the previous value of 33,288,000 gallons per year.

Emission Unit 11: New Dryhouse (Particulate Emissions)

Pollutant	Emission Limit or Standard	Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method
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SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS (CONTINUED)

Emission Unit 11: New Dryhouse (Particulate Emissions)				
PM	2.34 lbs/hr if the process rate is 0.5 tons/hr or less	401 KAR 59:010, Section 3(2)	2.0052 lb/ SCC unit (AP-42 9.9.1-1)	Calculate actual emissions; Compliance Assurance Monitoring; operation of control equipment (wet scrubber)
	$3.59 \cdot P^{0.62}$ lbs/hr, where P is the process rate in tons/hr if the process rate is greater than 0.5 tons/hr and less than or equal to 30 tons/hr			
	20% opacity	401 KAR 59:010, Section 3(1)(a)	----	Weekly U.S. EPA Reference Method 9 readings

Initial Construction Date: 2016

Applicable Regulation:

401 KAR 59:010, New process operations, applicable to all process operations, which is not subject to another emission standard with respect to particulates in 401 KAR Chapter 59, commenced on or after July 2, 1975.

40 CFR Part 64, Compliance Assurance Monitoring, applicable to pollutant-specific emissions units at a major source that is required to obtain a Title V permit and satisfies all of the following criteria:

- The unit is subject to an emission limitation or standard for the applicable regulated air pollutant, other than an emission limitation or standard proposed by the U.S. EPA Administrator after November 15, 1990 pursuant to Section 111 or 112 of the Clean Air Act;
- The unit uses a control device to achieve compliance with any such emission limitation or standard; and
- The unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source.

Comments:

Only PM emissions from the New Dryhouse are associated with this emissions unit. The stillage processed by the New Dryhouse is also a source of VOC emissions. The VOC emissions from the spent stillage processed by the New Dryhouse are associated with Emission Unit 03.

The facility must monitor and maintain records of differential pressure and liquid flow rates at the control device taken every 15 minutes of operation to meet the monitoring requirements for CAM for PM.

The facility must monitor and maintain records of weekly qualitative visual observations and any U.S. EPA

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS (CONTINUED)

Emission Unit 11: New Dryhouse (Particulate Emissions)

Reference Method 9 readings performed.

The facility must monitor and maintain records of grain processed and hours of operation on a monthly basis.

Emission Unit 12 and 13 (10004, 10005): Natural Gas-Fired Indired Heat Exchangers

Pollutant	Emission Limit or Standard	Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method
PM	0.10 lb/MMBtu	401 KAR 59:015 Section 4(1)(b)	Natural Gas: 7.6 lb/SCC unit (AP-42 1.4-2)	Assumed based upon AP-42 emission factors
	27% opacity; except 40% for 6 minutes in any 60 minutes and from building a new fire	401 KAR 59:015, Section 4(2)	----	Assumed based upon natural gas combustion
SO ₂	0.8 lb/MMBtu	401 KAR 59:015, Section 5(1)(b)	0.6 lb/SCC unit (AP-42 1.4-2)	Assumed based upon AP-42 emission factor

Initial Construction Date: 2021

Process Description:

71.7 MMBtu/ hr (each) natural gas-fired indirect heat exchangers

Applicable Regulations:

401 KAR 59:015, New indirect heat exchangers, applicable to units having a heat input capacity greater than 1 million BTU per hour (MMBtu/hr) and commenced on or after April 9, 1972.

40 CFR 60, Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, applicable to each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 100 MMBtu/hr or less, but greater than or equal to 10 MMBtu/hr.

Precluded Regulations:

401 KAR 51:017, Prevention of significant deterioration of air quality, applicable to the construction of a new major stationary source or a project at an existing major stationary source that commences construction after September 22, 1982, and located in an area designated attainment or unclassifiable under 42 U.S.C. 7407(d)(1)(A)(ii) and (iii). The source has accepted federally-enforceable limitations to preclude the requirements of 401 KAR 51:017.

40 CFR 63, Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, applicable to an industrial,

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS (CONTINUED)

Emission Unit 12 and 13 (10004, 10005): Natural Gas-Fired Indired Heat Exchangers

commercial, or institutional boiler or process heater as defined in 40 CFR 63.7575 that is located at, or is part of, a major source of HAP, except as specified in 40 CFR 63.7491. The source has accepted federally-enforceable limitations to preclude the requirements of 40 CFR 63, Subpart DDDDD.

Comments:

Potential emissions were determined for both units using emission factors from AP-42 for external combustion for natural gas. In the case of CO and NO_x potential emissions were determined using vendor estimates provided by the facility, future performance testing will determine actual emission factors. Potential emissions were determined using natural gas combustion based upon 8,760 hours/year of operation.

The facility must monitor and maintain records of the amount of natural gas combusted on a monthly basis.

Operation of all fossil fuel-fired boilers (including EUs 12 and 13) must be limited to a combined heat input rate of less than 250 MMBtu/hr for all affected facilities.

Emission Unit 14 (10006): Natural Gas-Fired Indired Heat Exchanger

Pollutant	Emission Limit or Standard	Regulatory Basis for Emission Limit or Standard	Emission Factor Used and Basis	Compliance Method
PM	0.10 lb/MMBtu	401 KAR 59:015 Section 4(1)(b)	Natural Gas: 7.6 lb/SCC unit (AP-42 1.4-2) No. 2 Fuel Oil: 2 lb/SCC unit (AP-42 1.3-1)	Assumed based upon AP-42 emission factors
	(Natural Gas) 20% opacity; except 27% for 6 minutes in any 60 minutes and from building a new fire	401 KAR 59:015, Section 4(2)	----	Assumed based upon natural gas combustion
	(No. 2 Fuel Oil) 20% opacity, except 27% for 6 minutes per hour	40 CFR 60.43c(c) and (d)	----	Initial U.S. EPA Reference Method 9 reading; subsequent emission observations according to 40 CFR 60.47c(a)(1), (2), or (3)
SO ₂	(Natural Gas) 0.8 lb/MMBtu	401 KAR 59:015, Section 5(1)(b)	0.6 lb/SCC unit (AP- 42 1.4-2)	Assumed based upon AP-42 emission factor

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS (CONTINUED)

Emission Unit 14 (10006): Natural Gas-Fired Indired Heat Exchanger				
	(No. 2 Fuel Oil) 0.50 lb/MMBtu (215 ng/J); or, as an alternative limit liquid fuel to less than or equal to 0.5 weight percent sulfur	40 CFR 60.42c(d) and (i)	47.1 lb/SCC unit (AP-42 1.3-1)	Fuel supplier certification
<p>Initial Construction Date: 2021</p> <p>Process Description: 71.7 MMBtu/ hr natural gas-fired indirect heat exchanger with the ability to combust No. 2 fuel oil.</p> <p>Applicable Regulations: 401 KAR 59:015, New indirect heat exchangers, applicable to units having a heat input capacity greater than 1 million BTU per hour (MMBtu/hr) and commenced on or after April 9, 1972.</p> <p>40 CFR 60, Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, applicable to each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 100 MMBtu/hr or less, but greater than or equal to 10 MMBtu/hr.</p> <p>Precluded Regulations: 401 KAR 51:017, Prevention of significant deterioration of air quality, applicable to the construction of a new major stationary source or a project at an existing major stationary source that commences construction after September 22, 1982, and located in an area designated attainment or unclassifiable under 42 U.S.C. 7407(d)(1)(A)(ii) and (iii). The source has accepted federally-enforceable limitations to prelude the requirements of 401 KAR 51:017.</p> <p>40 CFR 63, Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, applicable to an industrial, commercial, or institutional boiler or process heater as defined in 40 CFR 63.7575 that is located at, or is part of, a major source of HAP, except as specified in 40 CFR 63.7491. The source has accepted federally-enforceable limitations to preclude the requirements of 40 CFR 63, Subpart DDDDD.</p> <p>40 CFR 63, Subpart JJJJJ, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources, applicable to industrial, commercial, or institutional boilers as defined in 40 CFR 63.11237 located at, or is part of, an area source of hazardous air pollutants (HAP), except as specified in 40 CFR 63.11195. These boilers will meet the definition of “gas-fired boiler” in 40 CFR 63.11237 at all times. Gas-fired boilers are not subject to this regulation pursuant to 40 CFR 63.11195(e).</p>				

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS (CONTINUED)

Emission Unit 14 (10006): Natural Gas-Fired Indired Heat Exchanger

Comments:

Potential emissions were determined for this unit using emission factors from AP-42 for external combustion for natural gas and No. 2 fuel oil. In the case of CO and NO_x potential emissions were determined using vendor estimates provided by the facility, future performance testing will determine actual emission factors. For pollutants where natural gas combustion resulted in the greatest emissions, potential emissions were determined using natural gas combustion based upon 8,760 hours/year of operation. For pollutants where No. 2 fuel oil resulted in the greatest emissions, potential emissions were determined using No. 2 fuel oil combustion and natural gas combustion based upon 500 hours/year and 8,260 hours/year, respectively. For pollutants where emission factors were only available for No. 2 fuel oil, potential emissions were determined using No. 2 fuel oil combustion based upon 500 hours/year. Attributing a maximum of 500 hours/year to No. 2 fuel oil combustion conservatively accounts for emissions from No. 2 fuel oil from the boilers limited by the 40 CFR 63, Subpart JJJJJ definition of gas-fired boiler. Specifically, 40 CFR 63, Subpart JJJJJ limits the use of liquid fuel to periods of gas curtailment, gas supply interruption, startups, or periodic testing, maintenance, or operator training on liquid fuel in order to be considered a “gas-fired boiler” under the subpart. Periodic testing, maintenance, or operator training on liquid fuel cannot exceed a combined total of 48 hours during any calendar year.

The facility must monitor and maintain records of the amount of each fuel combusted on a monthly basis.

The facility must monitor and maintain records to demonstrate that the boilers meet the definition of “gas-fired boiler” under 40 CFR 63, Subpart JJJJJ.

When No. 2 fuel oil is used, the facility must monitor and maintain records of visible emissions according to monitoring method and frequency specified in 40 CFR 60, Subpart Dc.

Operation of all fossil fuel-fired boilers (including EU 14) must be limited to a combined heat input rate of less than 250 MMBtu/hr for all affected facilities.

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS (CONTINUED)

Testing Requirements/Results

Emission Unit(s)	Control Device	Parameter	Regulatory Basis	Frequency	Test Method	Permit Limit	Test Result	Operating Parameter(s) Established During Test	Activity Graybar	Date of last Compliance Testing
EU 09	Multicyclone; Baghouse	PM	401 KAR 50:045, Section 2	1 st and 4 th year of permit	U.S. EPA Reference Method 5	0.36 lb/MMBtu	0.0064 lb/MMBtu	N/A	CMN20140001	2/4/14
EU 09	Lime Injection	HCl	401 KAR 50:045, Section 2	Within 180 days of permit issuance	U.S. EPA Reference Method 26A	9.0 tons/yr (source-wide)	8.88361 lb/hr	Emission Factor	CMN20140001	2/4/14
EU 09	----	CO	40 CFR 63, Subpart JJJJJ	Initial	U.S. EPA Reference Method 10	420 ppm by volume @ 3% O ₂	126.34 ppm by volume @ 3% O ₂	O ₂ Level	CMN20140001	2/4/14
EU 09	----	CO	40 CFR 63, Subpart JJJJJ	Initial	U.S. EPA Reference Method 10	420 ppm by volume @ 3% O ₂	62.44 ppm by volume @ 3% O ₂	O ₂ Level	CMN20180003	12/19/18
EU 09	Multicyclone; Baghouse	PM	401 KAR 50:045, Section 2	1 st and 4 th year of permit	U.S. EPA Reference Method 5	0.36 lb/MMBtu	0.007 lb/MMBtu	N/A	CMN20190001	3/26/19
EU 09	Lime Injection	HCl	401 KAR 50:045, Section 2	Within 180 days of permit issuance	U.S. EPA Reference Method 26A	9.0 tons/yr (source-wide)	7.696 lb/hr	N/A	CMN20190001	3/26/19

SECTION 3 – EMISSIONS, LIMITATIONS AND BASIS (CONTINUED)

EUs 12, 13, & 14	----	CO	401 KAR 50:045, Section 2	Within 60 days of achieving maximum production rate but no later than 180 days after initial startup	U.S. EPA Reference Method 10	N/A	TBD	Emission Factor	TBD	TBD
EUs 12, 13, & 14	----	NOx	401 KAR 50:045, Section 2	Within 60 days of achieving maximum production rate but no later than 180 days after initial startup	U.S. EPA Reference Method 7	N/A	TBD	Emission Factor	TBD	TBD

FOOTNOTES

SECTION 4 – SOURCE INFORMATION AND REQUIREMENTS

Table A - Group Requirements:

Emission and Operating Limit	Regulation	Emission Unit
225 tpy of SO ₂ emissions source-wide on a 12-month rolling total basis	To preclude the applicability of 401 KAR 51:017, <i>Prevention of significant deterioration of air quality</i>	EU 07, 08, 09, 12, 13, and 14
9.0 tpy of HCl emissions source-wide on a 12-month rolling total basis	To preclude the applicability of 40 CFR 63, Subpart DDDDD, <i>National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters</i>	EU 09
250 MMBtu/hr maximum combined heat input	To prevent the fossil fuel boilers from becoming one of the 28 listed source categories under the Prevention of Significant Deterioration (PSD) permitting program	EU 07, 08, 09, 12, 13, and 14

Table B - Summary of Applicable Regulations:

Regulation	Basis of Determination	Emission Unit
40 CFR 60, Subpart Dc	<i>Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units</i> , applicable to each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 100 MMBtu/hr or less, but greater than or equal to 10 MMBtu/hr.	EU 07, 08, 12, 13 14
40 CFR 60, Subpart VVa	<i>Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006</i> , applicable to pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, and flanges or other connector in VOC service in the synthetic organic chemicals manufacturing industry, as defined in 40 CFR 60.481a.	EU 06
40 CFR 63, Subpart JJJJJ	<i>National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources</i> , applicable to industrial, commercial, or institutional boilers as defined in 40 CFR 63.11237 located at, or is part of, an area source of hazardous air pollutants (HAP), except as specified in 40 CFR 63.11195.	EU 09
40 CFR Part 64	<i>Compliance Assurance Monitoring (CAM)</i> , applicable to pollutant-specific emissions units at a major source that is required to obtain a Title V permit and satisfies all of the following criteria:	EU 09, 11

SECTION 4 – SOURCE INFORMATION AND REQUIREMENTS (CONTINUED)

	<ul style="list-style-type: none"> The unit is subject to an emission limitation or standard for the applicable regulated air pollutant, other than an emission limitation or standard proposed by the U.S. EPA Administrator after November 15, 1990 pursuant to Section 111 or 112 of the Clean Air Act; The unit uses a control device to achieve compliance with any such emission limitation or standard; and The unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source. 	
401 KAR 52:020	<i>Title V permits</i> , applicable to major sources as defined in 401 KAR 52:001, Section 1(45)	Source-wide
401 KAR 59:010	<i>New process operations</i> . Applicable to all process operations, which is not subject to another emission standard with respect to particulates in 401 KAR Chapter 59, commenced on or after July 2, 1975.	EU 11
401 KAR 59:015	<i>New indirect heat exchangers</i> , applicable to units having a heat input capacity greater than 1 million BTU per hour (MMBtu/hr) and commenced on or after April 9, 1972.	EU 07, 08, 12, 13, 14
401 KAR 61:015	<i>Existing indirect heat exchangers</i> . Applicable to indirect heat exchangers having a heat input capacity of more than 1 MMBtu/hr commenced before April 9, 1972 for units with a capacity of 250 MMBtu/hr or less.	EU 09
401 KAR 61:020	<i>Existing process operations</i> . Applicable to all process operations, which are not subject to another emission standard with respect to particulates in 401 KAR Chapter 61, commenced before July 2, 1975.	EU 02
401 KAR 63:010	<i>Fugitive emissions</i> . Applicable to an apparatus, operation, or road which emits or may emit fugitive emissions provided that the fugitive emissions from such facility are not elsewhere subject to an opacity standard within the administrative regulations of the Division for Air Quality.	EU 01

Table C - Summary of Precluded Regulations:

Regulation	Basis of Determination	Emission Unit
40 CFR 63, Subpart DDDDD	<i>National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters</i> , applicable to an industrial, commercial, or institutional boiler or process heater as defined in 40 CFR 63.7575 that is located at, or is part of, a major source of HAP, except as specified	EU 07, 08, 09, 12, 13, 14

SECTION 4 – SOURCE INFORMATION AND REQUIREMENTS (CONTINUED)

Regulation	Basis of Determination	Emission Unit
	in 40 CFR 63.7491. The source has accepted federally-enforceable limitations to preclude the requirements of 40 CFR 63, Subpart DDDDD.	
40 CFR 63, Subpart JJJJJ	<i>National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources</i> , applicable to industrial, commercial, or institutional boilers as defined in 40 CFR 63.11237 located at, or is part of, an area source of hazardous air pollutants (HAP), except as specified in 40 CFR 63.11195. These boilers will meet the definition of “gas-fired boiler” in 40 CFR 63.11237 at all times. Gas-fired boilers are not subject to this regulation pursuant to 40 CFR 63.11195(e).	EU 07, 08, 14
401 KAR 51:017	<i>Prevention of significant deterioration of air quality</i> , applicable to the construction of a new major stationary source or a project at an existing major stationary source that commences construction after September 22, 1982, and located in an area designated attainment or unclassifiable under 42 U.S.C. 7407(d)(1)(A)(ii) and (iii). The source has accepted federally-enforceable limitations to preclude the requirements of 401 KAR 51:017.	EU 07, 08, 09, 12, 13, 14

Table D - Summary of Non Applicable Regulations:

N/A

Air Toxic Analysis

N/A

Single Source Determination

N/A

SECTION 5 - PERMITTING HISTORY

Permit	Permit type	Activity#	Complete Date	Issuance Date	Summary of Action
V-00-001	Initial Issuance	F471	02/12/98	06/21/2000	Initial Title V Permit
V-07-024	Renewal	APE20060001	05/10/2006	10/31/2007	Added CAM plan for coal boiler, added limits to Section 112(j) of the Clean Air Act
V-07-024 R1	Revision	APE20080002	06/11/2008	10/13/2008	Removed limit on coal usage, added limit on chlorine content of coal
V-07-024 R2	Administrative Amendment	APE20090001	05/05/2009	05/08/2009	Name Change
V-07-024 R3	Administrative Amendment	APE20100003	10/22/2010	11/05/2010	Name Change, Update of Off-Permit Changes
V-12-038	Renewal	APE20120001	05/31/12	12/21/2013	Renewal
V-12-038 R1	Minor Revision	APE20130002	5/06/2013	7/12/2013	Addition of tanks 712-717 and 772-775 to EU 06
V-12-038 R2	Minor Revision	APE20130006	7/30/2013	10/18/13	Removed, replaced and added tanks and pumps
V-12-038 R3	Significant Revision	APE2016001/ APE20160002	9/26/2016	4/11/2017	Addition of New Dryhouse and Bottling Lines
V-17-034	Renewal & Minor Revision	APE20170002 & APE20180003 & APE20180004 & APE20180006	8/4/17 & 5/29/18 & 7/2/2018 & 9/28/2018	10/2/2018	Permit Renewal; Changes to Insignificant Activities & Revision to CAM Plans & Addition of Insignificant Activities & Ownership Name Change

APPENDIX A – ABBREVIATIONS AND ACRONYMS

Btu	– British thermal unit
CO	– Carbon Monoxide
Division	– Kentucky Division for Air Quality
GHG	– Greenhouse Gas
HAP	– Hazardous Air Pollutant
HF	– Hydrogen Fluoride (Gaseous)
MSDS	– Material Safety Data Sheets
mmHg	– Millimeter of mercury column height
NO _x	– Nitrogen Oxides
PM	– Particulate Matter
PM ₁₀	– Particulate Matter equal to or smaller than 10 micrometers
PM _{2.5}	– Particulate Matter equal to or smaller than 2.5 micrometers
PTE	– Potential to Emit
SO ₂	– Sulfur Dioxide
TF	– Total Fluoride (Particulate & Gaseous)
VOC	– Volatile Organic Compounds

APPENDIX B – INDIRECT HEAT EXCHANGER EMISSIONS LIMITATIONS

Summary of All Affected Facilities Used to Determine 401 KAR 59:015 Emission Limits								
EU	Fuel(s)	Capacity (MMBtu/hr)	Constructed	Basis for PM Limit	Total Heat Input Capacity for PM Limit (MMBtu/hr)	Basis for SO ₂ Limit	Total Heat Input Capacity for SO ₂ Limit (MMBtu/hr)	Notes
07 08	Natural Gas; No. 2 Fuel Oil	41.85 (each)	1993	Section 4 (1)(c)	183.2	Section 5(1)(c)	183.2	To be removed when EUs 12,13, & 14 are fully operational
09	Coal	99.5	1961	Unit Subject to 401 KAR 61:015				To be removed when EUs 12,13, & 14 are fully operational
12 13	Natural Gas	71.7 (each)	Proposed 2021	Section 4 (1)(b)	403.6	Section 5(1)(b)	403.6	
14	Natural Gas; No. 2 Fuel Oil	71.7	Proposed 2021	Section 4 (1)(b)	403.6	Section 5(1)(b)	403.6	

PM limit $E_P = 0.9634 (T^{-0.2356})$ where T is the total heat input capacity
SO₂ limit $E_S = 7.7223 (T^{-0.4106})$ where T is the total heat input capacity